

REMARKS

Claims 1-16 are pending. Claims 1-16 stand rejected. Claim 15 is canceled.

Rejections Under 35 U. S.C. § 112

The Office Action at page 2, paragraph 2 sets forth, "claims 1-5, 9 and 11-16 are rejected under 35 U.S.C. 112, first paragraph." Specifically, the Examiner states that "there is no description for electrodes disposed ... along said length, where the width is shorter than a length of the substrate." Applicants have determined that due to a clerical error the claims in the previous amendment showing revision marks on pages 11-12 of the amendment were not properly presented on pages 1-2 of that amendment. This clerical error is addressed in this response. Accordingly, the claims as presented have electrodes disposed on the width of the substrate. Therefore, applicants respectfully request that the rejection of claims 1-5, 9 and 11-16 under 35 U.S.C. § 112, first paragraph, be withdrawn.

Rejections Under 35 U. S.C. § 102

The Office Action at page 2, paragraph 4 sets forth, "claims 1-2, 4-7, 9-11, and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Edwards, Jr. et al." Applicants respectfully submit that this rejection is overcome by the amendments to the claims for the reasons set forth below.

Applicants' invention, as recited in claim 1 (as amended), includes features which were neither disclosed or suggested by Edwards, Jr., namely:

...a pair of electrodes disposed on said substrate, said pair of electrodes being disposed on both end portions of said substrate along said width ...

...a resistor element disposed between said pair of electrodes, said resistor element comprising side sections, each of said side sections connected to each of said pair of electrodes along a substantial portion of a length of said pair of electrodes along said width...

a single S-shaped section disposed between said side sections, said S-shaped section being free of a trimming portion. (Emphasis added)

These features are described in applicants' specification, for example, at page 3, line 22 through page 4, line 23.

According to claim 1, the side sections of the resistor element are connected to the pair of electrodes along a substantial portion of the length of the pair of electrodes along the width of the substrate. In addition, a single S-shaped section disposed between said side sections is free of a trimming portion.

Edwards, Jr. is relied upon as "[disclosing] at Fig. 1 or Fig. 2 ... S-shaped section 24 having side sections at the ends, and electrodes 22." Office Action at page 3, paragraph 4. Edwards, Jr. does not disclose or suggest, however, a single "S" shaped section between the side sections. Rather, Edwards, Jr. discloses a multiple "S" shaped section between the side sections. See, Figs. 1, 2, 6 and 7. Furthermore, it is a requirement in Edwards, Jr. that multiple "S" shaped sections be used in order to reach the desired result in Edwards, Jr., specifically, a voltage divider.

In contrast, Applicants' invention, as recited in amended claim 1, requires that a single "S" shaped section be provided between the side sections of the resistor element.

It is because Applicants have included the feature of a single "S" shaped section provided between the side sections of the resistor element, that applicants are able to provide a resistor having greater surge voltage capability and increased accuracy. Edwards, Jr. does not achieve this advantage because Edwards, Jr. has

a resistive element having multiple "S" shaped sections connected to the electrode at an end of the resistive element.

For the reasons set forth above, claim 1 is neither disclosed nor suggested by Edwards, Jr. et al. Claim 1 is therefore not subject to rejection under 35 U.S.C. §102(b) as being anticipated by Edwards, Jr. Applicants respectfully request that the rejection be withdrawn and the claim allowed.

Although not identical, claims 6 and 11 recite features similar to those of claim 1 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 1.

Further, claims 2, 4, 5, 7, 9, 10, 13, 14 and 16 ultimately depend upon either claim 1, 6 or 11 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 1, 6, and 11.

The Office Action at page 3, paragraph 5 sets forth, "claims 1-2, 4, 6-7, 9-11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Mizukoshi et al." Applicants respectfully submit that this rejection is overcome by the amendments to the claims for the reasons set forth below.

Mizukoshi is relied upon as "[disclosing] at Figs. 1 and 4 ... the S-shape having side sections at the ends, and electrodes 3, 4." Office Action at page 3, paragraph 5. Mizukoshi does not disclose or suggest, however, a single "S" shaped section between the side sections of the resistor element. Thus, Mizukoshi does not anticipate applicants' invention as recited in claim 1. Therefore, applicants respectfully request that the rejection of claim 1 as being anticipated by Mizukoshi be withdrawn and the claim allowed.

Although not identical, claims 6 and 11 recite features similar to those of claim 1 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 1.

Further, claims 2, 4, 7, 9-10 and 13 ultimately depend upon either claim 1, 6 or 11 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 1, 6, and 11.

The Office Action at page 3, paragraph 6 sets forth, "claims 1-2, 6-7, 11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Collins." Applicants respectfully submit that this rejection is overcome by the amendments to the claims for the reasons set forth below.

Collins is relied upon as "[disclosing] ... at 1A and Fig. 3 ... the S-shape R having side sections at the ends." Office Action at page 3, paragraph 6. Collins does not disclose or suggest, however, a single "S" shaped section between the side sections of the resistor element. Thus, Collins does not anticipate applicants' invention as recited in claim 1. Therefore, applicants respectfully request that the rejection of claim 1 as being anticipated by Collins be withdrawn and the claim allowed.

Although not identical, claims 6 and 11 recite features similar to those of claim 1 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 1.

Further, claims 2, 7 and 13 ultimately depend upon either claim 1, 6 or 11 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 1, 6, and 11.

The Office Action at page 4, paragraph 7 sets forth, "claims 1-6 and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Kambara et al." Applicants respectfully submit that this rejection is overcome by the amendments to the claims for the reasons set forth below.

Kambara is relied upon as "[disclosing] the claimed invention at Figs. 3-4. The side sections are part of the resistor under the electrodes 3,"3" and 4"4"." Office Action at page 4, paragraph 7. Kambara does not disclose or suggest, however, a single "S" shaped section between the side sections of the resistor

element. Thus, Kambara does not anticipate applicants' invention as recited in claim 1. Therefore, applicants respectfully request that the rejection of claim 1 as being anticipated by Kambara be withdrawn and the claim allowed.

Although not identical, claims 6 and 11 recite features similar to those of claim 1 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 1.

Further, claims 2-5, 8-10 and 12 ultimately depend upon either claim 1, 6 or 11 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 1, 6, and 11.

Rejections Under 35 U. S.C. § 103

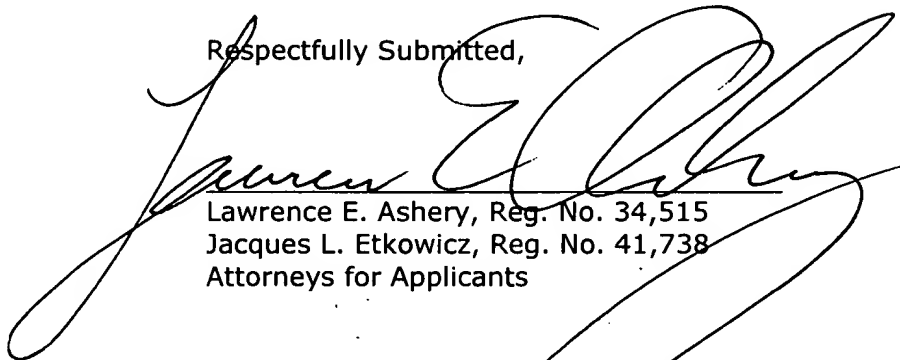
The Office Action at page 4, paragraph 9 sets forth, "claims 3, 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizukoshi et al. in view of Collins." Applicants assume that because the accompanying argument provided by in the Office Action with respect to this rejection discusses Solow rather than Collins, the Examiner meant to reject the claims over the combination of Mizukoshi and Solow. Accordingly, applicants will address this latter combination and respectfully submit that this rejection is overcome by the amendments to the claims for the reasons set forth below.

Mizukoshi is relied upon as "[disclosing] the claimed invention except for a trimming groove Solow discloses a groove in the side sections to adjust the resistance." Office Action at page 4, paragraph 9. Solow does not disclose or suggest, however, a single "S" shaped section between the side sections of the resistor element. Thus, Solow fails to make up or the deficiencies of Mizukoshi discussed above with respect to the 35 U.S.C. §102(b) rejection above as it relates to claim 1. Therefore, applicants respectfully request that the rejection of claim 3 (which depends on claim 1) as being unpatentable over Mizukoshi in view of Solow be withdrawn and the claim allowed.

Although not identical, claims 8 and 12 recite features similar to those of claim 3 and, thus, are likewise not subject to rejection for at least the reasons set forth above with respect to claim 3.

In view of the remarks set forth above, Applicants submit that the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully Submitted,



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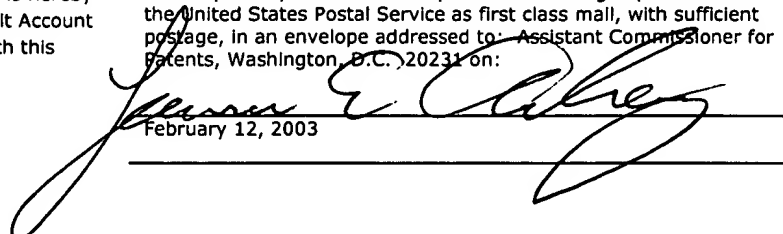
Enclosures: Version With Markings To Show Changes Made

Dated: February 12, 2003

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February 12, 2003

VERSION WITH MARKINGS TO SHOW CHANGES MADE**IN THE CLAIMS:**

- 1 1. (Four Times Amended) A resistor comprising:
2 a substrate having a width shorter than a length of said substrate;
3 a pair of electrodes disposed on said substrate, said pair of electrodes being
4 disposed on both end portions of said substrate along said width;
5 a resistor element disposed between said pair of electrodes, said resistor
6 element comprising side sections, each of said side sections connected to each of
7 said pair of electrodes along a substantial portion of a length of said pair of
8 electrodes along said width, and
9 ~~an~~ a single S-shaped section disposed between said side sections, said S-
10 shaped section being free of a trimming portion.
- 1 6. (Three Times Amended) A method of manufacturing a resistor
2 comprising the steps of:
3 forming a pair of electrodes on a substrate; and
4 forming a resistor element between said pair of electrodes, said resistor
5 element comprising i) rectangular sections connected to each of said pair of
6 electrodes along a substantial portion of a length of said pair of electrodes along a
7 width of said substrate and ii) a single S-shaped section disposed between said
8 rectangular sections, said S-shaped section being free of a trimming portion.
- 1 11. (Three Times Amended) A resistor comprising:
2 a substrate having a width shorter than a length of said substrate;
3 a pair of electrodes disposed on said substrate, said pair of electrodes being
4 disposed on both end portions of said substrate along said width;

5 a resistor element situated between said pair of electrodes, said resistor
6 element including:

7 a pair of side sections, each of said side sections connected to a respective
8 one of said pair of electrodes along a substantial portion of a length of said pair of
9 electrodes along said width, and

10 ~~an~~ a single S-shaped section situated between said pair of side sections;

11 wherein a width of said S-shaped section along said length of said substrate
12 is less than a width of each of said side sections along said length of said
13 substrate.